

## ABSTRACT

*PT ULS is one of the companies engaged in textile production and includes a large textile company in Indonesia. The production of this company is yarn and cloth. The resulting product is distributed for domestic as well as overseas. In 2015 the company experienced a decrease in total production is caused by several major factors namely the level of demand decreased to the availability of raw materials that began difficult to obtain by the company and the high level of failure machine. To keep the company's profit from continuing to decrease, maintenance policy is based on cost approach.*

*The method used is Life Cycle Cost to determine the amount of Maintenance Crew and optimal Retirement Age of a machine. To obtain total LCC, cost processing required by LCC method, are sustaining cost and acquisition cost. In addition to using Life Cycle Cost method, also used Cost of Unreliability method to analyze costs due to system unreliable.*

*Based on the calculation with LCC method, obtained LCC of Rp 2.722.027.614 with a Maintenance Crew of two person, and optimal machine life or Retirement Age is five years. Based on the calculation of cost of unreliability obtained due to cost of unreliable machine is Rp. 261.956.076, where the system includes Spindles, Traverse, Gear End Box, and GE Box. From an operational point of view, the biggest problem with COUR lies in the Spindle due to maintainability, followed by Traverse due to unreliability. This can be minimized by training for the technician or Maintenance Crew to be able to improve the skills or ability to care for a machine.*

**Keyword :** *Life Cycle Cost, Retirement Age, Maintenance crew, Cost of Unreliability*